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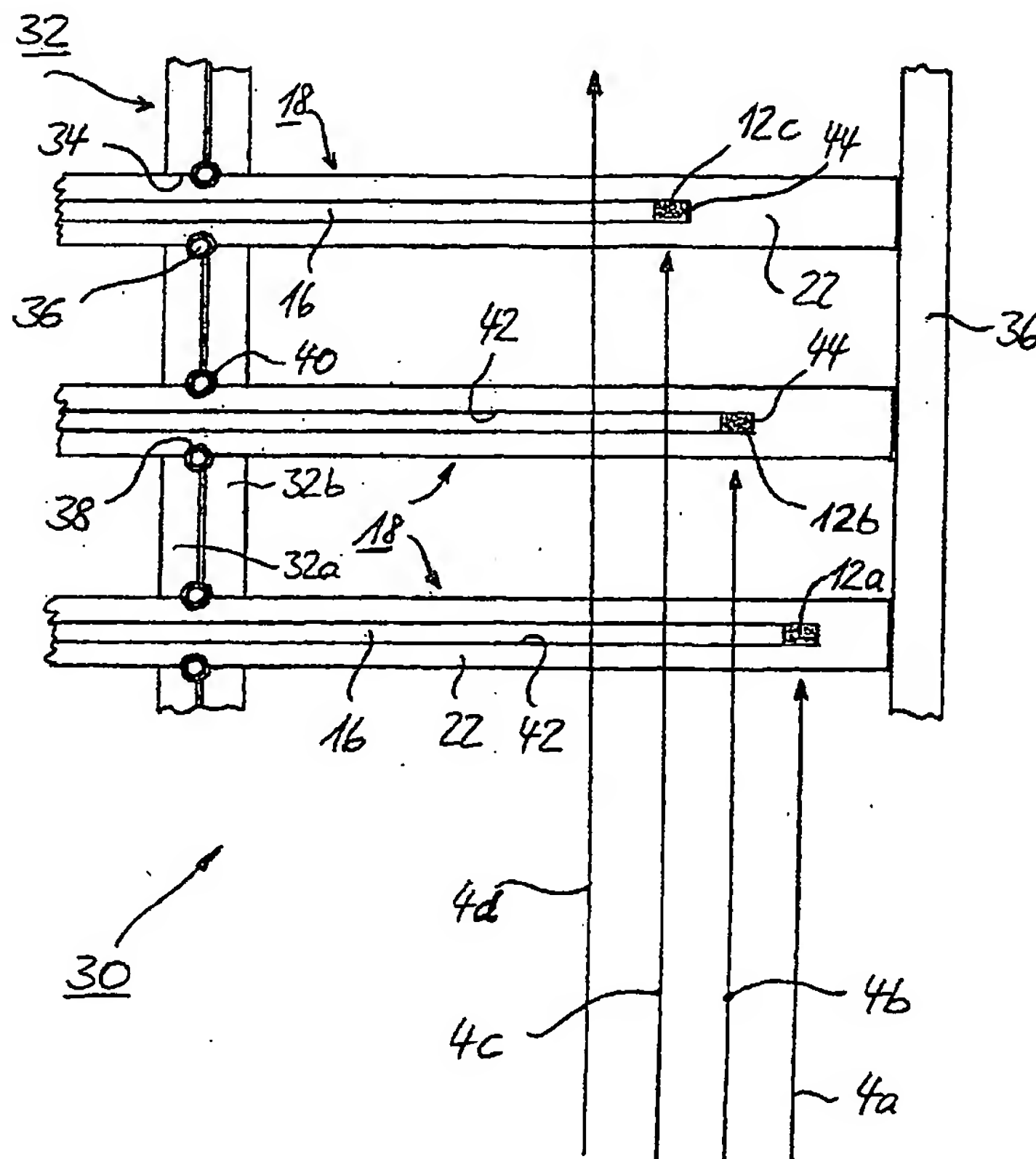
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(54) Title: **AN INORGANIC SCINTILLATING MIXTURE AND A SENSOR ASSEMBLY FOR CHARGED PARTICLE DOSIMETRY**



(57) Abstract: The invention discloses an inorganic scintillating mixture comprising at least a first and a second component each having a characteristic behaviour in response to the irradiation with charged particles, such as protons and heavy ions, showing a typical Bragg peak with respect to a relative depth dose; said first component having a quenching characteristic in the bragg peak region and said second component showing an increased efficiency in the bragg peak region both related to a reference curve for the relative dose. The invention discloses also a sensor assembly (30) for charged particle dosimetry, comprising : a three-dimensional array of sensor heads (12); each sensor head (12) being located on one end of an optical fibre (16), which is associated with an optical light intensity measuring assembly (20). The head (12) and its optical fibre (16) are inserted into a respective cavity (42) located in a holder member (22).

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